

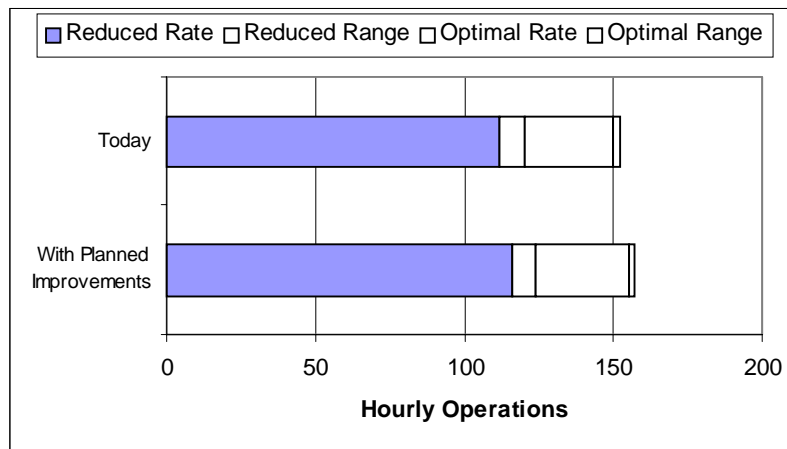
Memphis International Airport Benchmarks

- The current capacity benchmark at Memphis is 150-152 flights per hour in good weather.
- Current capacity falls to 112-120 flights (or fewer) per hour in adverse weather conditions, which may include poor visibility, unfavorable winds or heavy precipitation.
- In 2000, less than 0.1% of the flights were delayed significantly (more than 15 minutes).
- In both good and adverse weather, Memphis' scheduled traffic rarely exceeds the current capacity of the airport, as arrival and departure traffic rarely contend for use of the runway at the same time.
- If the characteristics of the arrival and departure demand at the airport were to change so that arrivals and departures were simultaneously close to their current peaks, the airport would be operating close to its good weather capacity.
- Technology and procedural improvements are expected to improve the Memphis capacity benchmark by 3% (to 155-157 flights per hour) over the next 10 years, while the adverse weather capacity benchmark will increase by 4% (to 116-124 flights per hour).
- These capacity increases could be brought about as a result of:
 - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
 - FMS/RNAV Routes, which allow a more consistent flow of aircraft to the runway.
- Demand at Memphis is projected to grow by 30% over the next decade, indicating that delays could grow in the future, depending on whether additional traffic is distributed throughout the day or simply added to existing peak periods.

Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

Scenario	Optimum Rate	Reduced Rate
Today	150-152	112-120
New Runway	N/A	N/A
With planned improvements	155-157	116-124



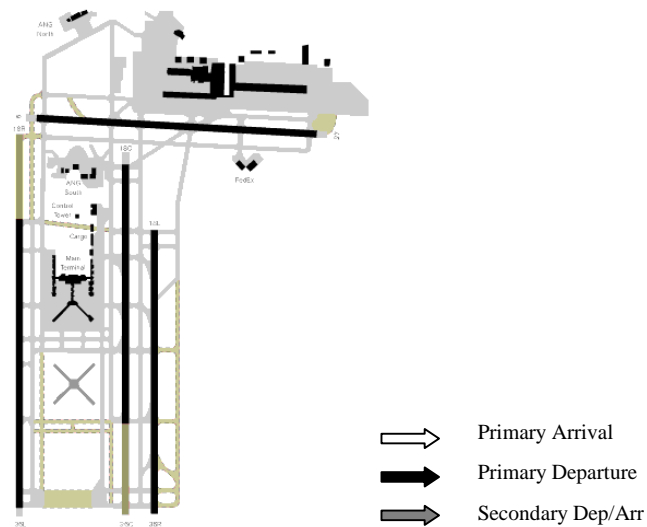
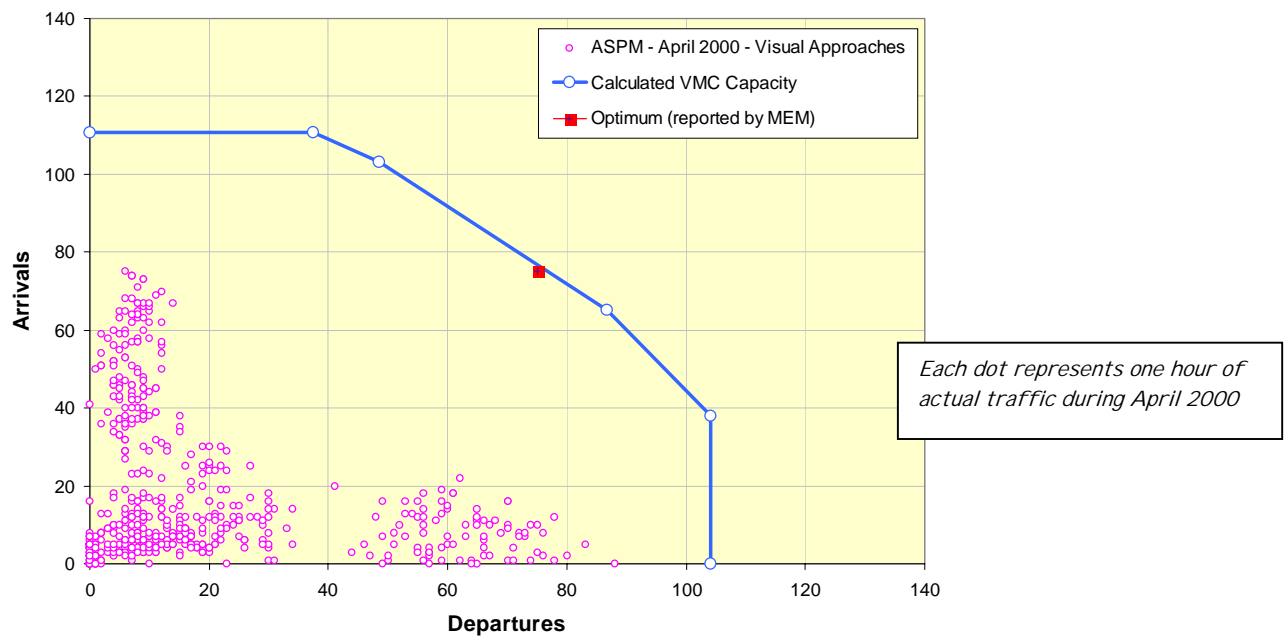
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
 - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
 - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
 - Taxiway and gate congestion, runway crossings, slot controls, construction activity
 - Terminal airspace, especially limited departure headings
 - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.

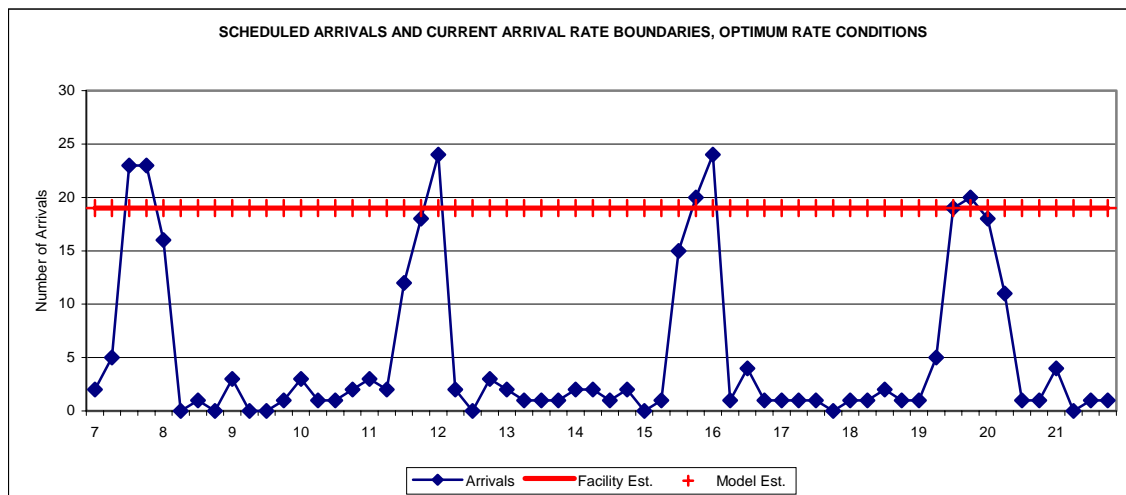
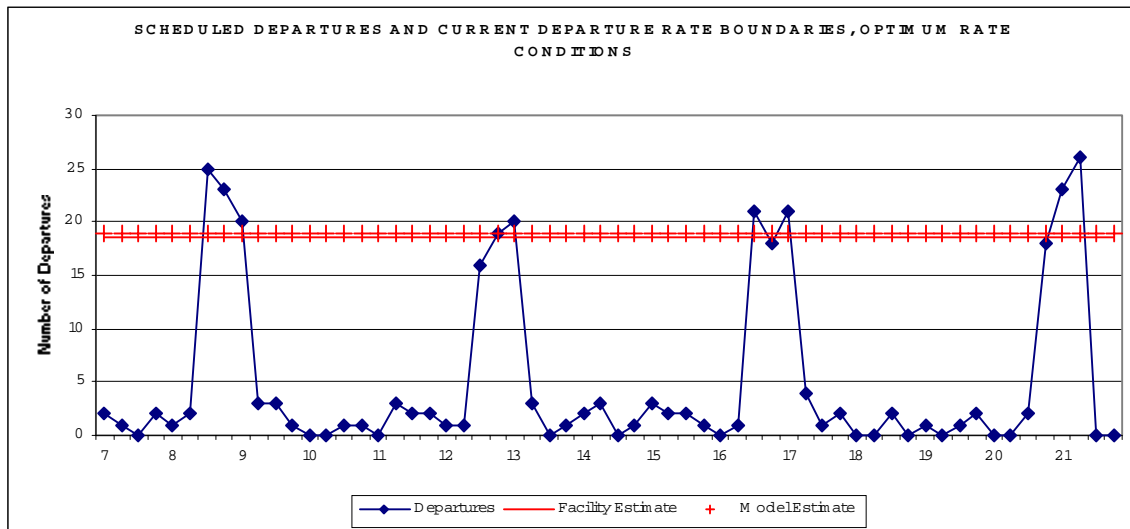
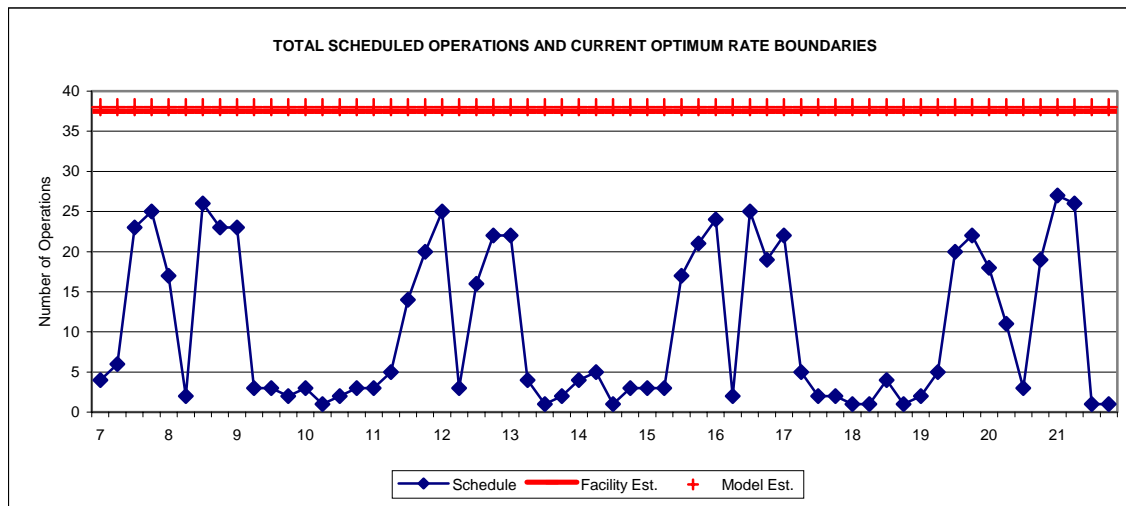
The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

Current Operations – Optimum Rate

- Visual approaches, visual separation
 - North: Arr: 36R/L, 27 Dep: 36 L/C/R
 - Arrivals primarily to two parallel runways
 - Departures from two or more runways
- ASPM data is actual hourly traffic counts

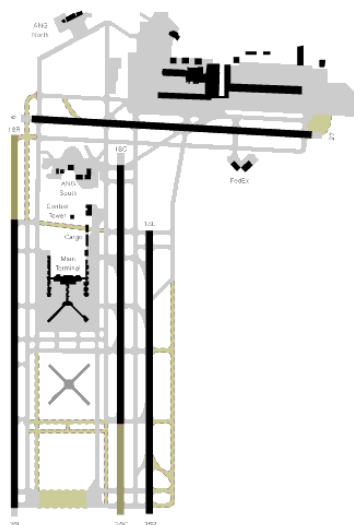
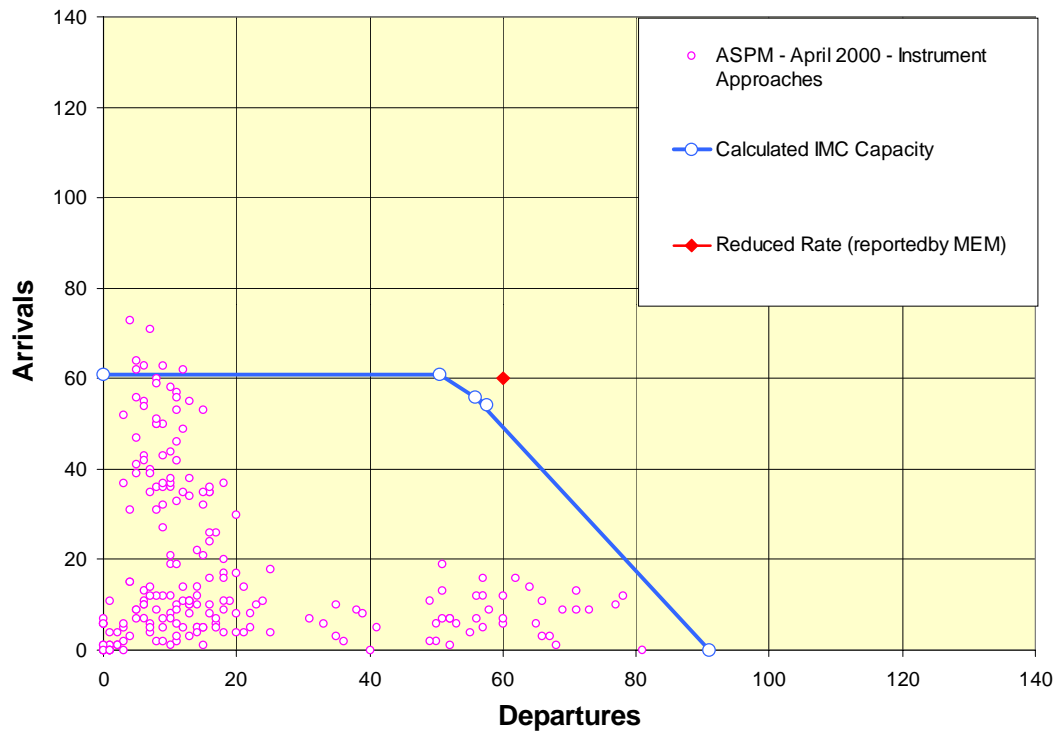


Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions



Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
 - Arrivals to two parallel runways 36 R/L
 - Departures from 36 R/C/L, sometimes 9/27
- Calculated capacities are close to reported AAR and ADR
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates



Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions

